UNITED STATES PATENT AND TRADEMARK OFFICE

# NOTICE OF ALLOWANCE AND FEE(S) DUE

| 22883 | 7590 | 03/23/2009 |
|---|---|---|

SWERNOFSKY LAW GROUP PC
548 MARKET ST.
SAN FRANCISCO, CA 94104

| EXAMINER |
|---|
| HO, BINH VAN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2163 | |

DATE MAILED: 03/23/2009

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/750,346 | 12/31/2003 | Gil I. Nadel | 311.1029.01 | 9474 |

TITLE OF INVENTION: OBJECT-LEVEL DATABASE PERFORMANCE MANAGEMENT

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | NO | $1510 | $0 | $0 | $1510 | 06/23/2009 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.  THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS.
THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON
PETITION BY THE APPLICANT.  SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE
MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED.  THIS
STATUTORY PERIOD CANNOT BE EXTENDED.  SEE 35 U.S.C. 151.  THE ISSUE FEE DUE INDICATED ABOVE DOES
NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION.  IF AN ISSUE FEE HAS
PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM
WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW
DUE.**

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current
SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown
above.

B. If the status above is to be removed, check box 5b on Part B -
Fee(s) Transmittal and pay the PUBLICATION FEE (if required)
and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now
claiming SMALL ENTITY status, check box 5a on Part B - Fee(s)
Transmittal and pay the PUBLICATION FEE (if required) and 1/2
the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office
(USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b"
of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a
request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing
the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to
Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of
maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

Page 1 of 3

# PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to:** **Mail**   Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**or Fax**   (571)-273-2885

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22883          7590          03/23/2009

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548 MARKET ST.
SAN FRANCISCO, CA 94104

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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TITLE OF INVENTION: OBJECT-LEVEL DATABASE PERFORMANCE MANAGEMENT

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|---|---|---|---|---|---|---|
| nonprovisional | NO | $1510 | $0 | $0 | $1510 | 06/23/2009 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| HO, BINH VAN | 2163 | 707-103000 |

**1.** Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

**2.** For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered patent attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

**3.** ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE                              (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) :   ☐ Individual  ☐ Corporation or other private group entity  ☐ Government

**4a.** The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

**4b.** Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

**5. Change in Entity Status** (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____       Date _____

Typed or printed name _____       Registration No. _____

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.          OMB 0651-0033          U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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DATE MAILED: 03/23/2009

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
### (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 283 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 283 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

| | Application No. | Applicant(s) |
|---|---|---|
| **Notice of Allowability** | 10/750,346 | NADEL ET AL. |
| | Examiner | Art Unit |
| | BINH V. HO | 2163 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *01/21/2009*.

2. ☒ The allowed claim(s) is/are *1 and 5-25*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

         a) ☐ All    b) ☐ Some*   c) ☐ None   of the:

            1. ☐ Certified copies of the priority documents have been received.

            2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

            3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
               International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of
    each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the
     attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
     Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
     of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
     Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

| /BH/ | /don wong/ |
|---|---|
| Examiner | Supervisory Patent Examiner, Art Unit 2163 |

## DETAILED ACTION

### Examiner's Amendment

1.      An examiner's amendment to the record appears below.  Should the changes

and /or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.3.12.  To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.


2.      The following claim has been amended upon agreement by applicant during a

telephone conversation with Mr. Pete Tormey on 03/13/2009.


        Amendments to claims 1, 9, 17, and 25; and cancel claims 2-4:


        Claim 1 (Currently Amended):

        A method for tuning database objects, the method comprising:

        operating agent software on a database server computer system, said

agent software operative to collect and store performance data for a plurality of

database objects, wherein the performance data comprises a plurality of access times,

wherein each of the plurality of database objects comprises an aggregation of stored

data;

        correlating the access times to the database objects;

detecting a performance problem in the database server computer system

in response to the correlating;

identifying a problematic database object of the plurality of database objects

using the performance data for the plurality of database objects, wherein the

problematic database object is related to the performance problem; ~~and~~

tuning the problematic database object to improve performance of access

to the stored data in the database server computer system; and

wherein tuning the problematic database object to improve performance of

access to the stored data in the database server computer system comprises moving

the problematic database object from nonvolatile storage to volatile storage for

improved speed of access, creating a new access path to the problematic database

object, moving the problematic database object from heavily loaded storage

components to less loaded storage components.


Claim 2 (Cancelled)

Claim 3 (Cancelled)

Claim 4 (Cancelled)

Claim 9 (Currently Amended)

A computer-readable storage medium comprising

program instructions, wherein the program instructions are computer-

executable to implement:

collecting and storing performance data for a plurality of database objects in a

database server computer system, wherein the performance data comprises a plurality

of access times, wherein each of the plurality of database objects comprises an

aggregation of stored data;

correlating the access times to the database objects;

detecting a performance problem in the database server computer system

in response to the correlating;

identifying a problematic database object of the plurality of database objects

using the performance data for the plurality of database objects, wherein

the problematic database object is related to the performance problem; ~~and~~

tuning the problematic database object to improve performance of access to the

stored data in the database server computer system; and

wherein tuning the problematic database object to improve performance of

access to the stored data in the database server computer system comprises moving

the problematic database object from nonvolatile storage to volatile storage for

improved speed of access, creating a new access path to the problematic database

object, moving the problematic database object from heavily loaded storage

components to less loaded storage components.


Claim 17 (Currently Amended)

A performance management system, comprising:

a database server comprising a plurality of database objects, wherein

each of the plurality of database objects comprises an aggregation of stored

data; and

a performance warehouse which stores performance data for the plurality

of database objects, wherein the performance data comprises a plurality of access

times;

at least one processor; and a memory coupled to the at least one processor,

wherein the memory stores program instructions that are executable by the

at least one processor to:

monitor data access times using a software agent operative to capture

performance data for the database objects;

correlate performance data to the access times;

detect a performance problem in the database server in response to the

correlation;

identify a problematic database object of the plurality of database objects

using the performance data for the plurality of database objects, wherein the

problematic database object is related to the performance problem; ~~and~~

tune the problematic database object to improve performance of access

to the stored data in the database server<u>; and</u>

<u>wherein tuning the problematic database object to improve performance of</u>

<u>access to the stored data in the database server computer system comprises moving</u>

<u>the problematic database object from nonvolatile storage to volatile storage for</u>

improved speed of access, creating a new access path to the problematic database

object, moving the problematic database object from heavily loaded storage

components to less loaded storage components.


　　　　Claim 25 (Currently Amended)

　　　　A system for tuning database objects, the system comprising:

　　　　means for collecting and storing performance data for a plurality of database

objects in a database server computer system, wherein the performance data

comprises a plurality of access times~ wherein each of the plurality of database objects

comprises an aggregation of stored data;

　　　　means for correlating said database objects to said access times;

　　　　means for detecting a performance problem in the database server computer

system in response to said correlation;

　　　　means for identifying a problematic database object of the plurality of database

objects using the performance data for the plurality of database objects, wherein the

problematic database object is related to the performance problem; ~~and~~

　　　　means for tuning the problematic database object to improve performance of

access to the stored data in the database server computer system; and

　　　　mean for wherein tuning the problematic database object to improve

performance of access to the stored data in the database server computer system

comprises moving the problematic database object from nonvolatile storage to volatile

storage for improved speed of access, creating a new access path to the problematic

database object, moving the problematic database object from heavily loaded storage

components to less loaded storage components.


        The Examiner's amendment has been made in order to place the application in a

condition for allowance.


                        **Reasons for Allowance**

3.      The following is an examiner's statement of reason for allowance:

        Claims 1, 9, 17, and 25 are considered allowable since the prior made of record

and considered pertinent to the applicant's disclosure does not teach or suggest the

claimed limitations. Bossman (U.S. 2003/0182276) or Chambliss (U.S. 2005/0076154)

or Ganesh (U.S. 6,192,377) or Do (U.S. 2004/0172636), taken individually or in

combination, do not teach the claimed invention having  a method/system for tuning

database objects, the method comprising correlate performance data to the access

times; wherein tuning the problematic database object to improve performance of

access to the stored data in the database server computer system comprises moving

the problematic database object from nonvolatile storage to volatile storage for

improved speed of access, creating a new access path to the problematic database

object, moving the problematic database object from heavily loaded storage

components to less loaded storage components with a combination of all recitations as

defined in claims 1, 9, 17, and 25.

        Therefore, claims 1, and 5-25 *are* presently allowed.

4.      Any comments considered necessary by applicant must be submitted no later
than the payment of the issue fee and, to avoid processing delays, should preferably
accompany the issue fee.  Such submissions should be clearly labeled "Comments on
Statement of Reasons for Allowance."

## Inquiry

5.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Binh V. Ho whose telephone number is 571 272 8583.

The examiner can normally be reached on M-F from 8:00AM - 4:30PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don K. Wong can be reached on 571 272 1834.  The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).


                                        Binh V Ho
                                        Examiner
                                        Art Unit 2163


/don  wong/
Supervisory Patent Examiner, Art Unit 2163